







A Report on

One Week Online National Level Faculty Development Programme on "Impact of Emerging Technologies in AI/ML and Data Science"

Organized by Department of Computer Science & Engineering

In Association with Computer Society of India (CSI)

From 26-02-2024 to 02-03-2024



Organized & submitted by: Dr. R. Sudhakar, Associate Professor / CSE.

Co-coordinator: Dr. K. Sudhakar, Senior Assistant Professor / CSE

Resource persons:

Date: 26.02.2024

Session: I - Dr.Uma Shanakar,Indian Statistical Institute, Kolkata, India Session: II - DrGoutam Chakraborty, Professor & Dean /CSE, MITS

Date: 27.02. 2024

Session: I – Dr. Shaik Mahaboob Basha, Professor, GITAM University, Hyderabad

Session: II - Dr.G.N.Vivekananda, Associate Professor, VIT-Vellore

Date: 28.02. 2024

Session: I - Dr. BasabiChakraborty, Professor & Dean, MITS

Session: II - Dr K Veningston, Assistant Professor/CSE, NIT Srinagar

Date: 29.02. 2024

Session: I - Dr. R. Kalpana, Professor/CSE, Pondicherry Technological University

Session: II - Dr. Amita Pal, Professor, Indian Statistical Institute, Kolkata

Date: 01.03. 2024

Session: I - Dr. S. Gnanavel, Associate Professor/CSE, SRM Institute of Science and Technology, Chennai

Session: II - Dr. R. Nidhya Professor/CSE, MITS

Date: 02.03. 2024

Session: I - Dr. D. Chandramohan, Assistant Professor/CSE, Thapar Institute of Engineering & Technology

Session: II - Dr. A. Dhanapal, DELL EMC, Chennai

Mode of conduct: Online

Total Participants: 100 Faculties from various institutions.

About the FDP:

The programme aims to provide insights into core research issues and hands-on training in identifying appropriate research problems for integrating Artificial Intelligence in Data Science and its applications. This program addresses the research and applications of AI in Industry as well as in Academia

The primary goal of this Faculty Development Programme (FDP) is to provide comprehensive knowledge on in the emerging field of Artificial Intelligence and Data Science to faculty members.

Inaugural Session:

The Department of Computer Science & Engineering successfully hosted a one-week National Level Faculty Development Programme titled "Impact of Emerging Technologies in AI/ML and Data Science" from February 26 to March 02, 2024. This esteemed initiative was executed through an online platform, drawing a remarkable attendance of 100 participants nationwide.



The Faculty Development Programme commenced at 10:00 AM on February 26. Dr. R. Sudhakar, Convenor has given the opening remarks about the FDP program and Welcomed Principal, Head of the Department / CSE, Chief guest and Resource person and all the external participants and highlighted the institute achievements and facilities. Totally we received 100 registrations from various institutions.

Dr. C. Yuvaraj, Principal, graced the occasion with a felicitation address, adding an impression of significance to the event. His presence and spoken words brought gravitas to the proceedings. Dr. C. Yuvaraj extended his best wishes to all participants, advise them to actively participate in the FDP and embrace new knowledge and insights. Following the Principal's speech, Dr. R. Kalpana, Professor, Head of the Department, extended a cordial and insightful welcome to all attendees. In her address, she highlighted the program's importance of Artificial Intelligence and Data Science in the current environment.

Date: 26.02. 2024 Session: I - Dr.Uma Shanakar, Indian Statistical Institute, Kolkata, India

Dr. Umashankar delivered talk in the title of "Medical image analysis using deep learning" and he started with the Data Science basics and he discussed about various challenges and solutions through Image Processing techniques in the field of Medical industry. His lecture was very informative to the participants and given more insights on composites.

Date: 26.02, 2024 Session: II – Dr. Goutam Chakraborty, Professor & Dean /CSE, MITS

Dr. Goutam Chakraborty delivered talk in the title of "Data Mining Choice between contents and relations between Data Units" and He explained about the organization of contents expressed. He discussed his research work related with Data mining and the organization of the content management.

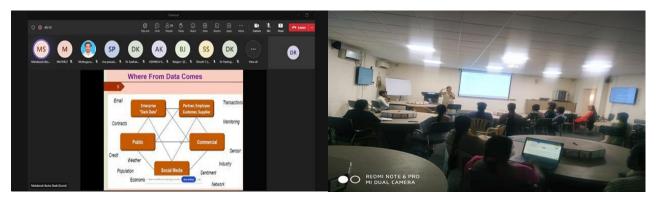


Date: 27.02.2024 Session: I – Dr. Shaik Mahaboob Basha, Professor, GITAM University, Hyderabad

Dr. Shaik Mahabbob Basha delivered talk in the title of "Data Visualization for Artificial Intelligence" and He discussed about the Data Visualization for Artificial Intelligence fundamentals and their applications. He provided the hands-on demo on Data Visualization with the use of Tableau Software.

Date: 27.02.2024 Session: II - Dr. G. N. Vivekananda, Associate Professor at VIT Vellore

Dr. G.N. Vivekananda delivered talk in the title of "Securing the Future: Harnessing AI for Cyber Defense" and He discussed about the basics of cyber security and its current challenges. He provided the hands-on demo on Real time attacks monitoring and control strategies.

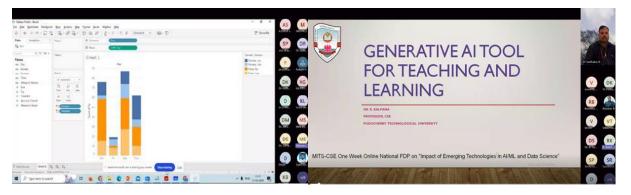


Date: 28.02.2024 Session: I - Dr. Basabi Chakraborty, Professor & Dean, MITS

Dr. Basabi Chakraborty delivered talk in the title of "Stability Analysis for Interpretable Feature Subset Selection" and She discussed about the Feature Extraction basics and its types. She also expressed her research problems and solutions in different feature subset selection.

Date: 28.02.2024 Session: II - Dr K Veningston, Assistant Professor/CSE, NIT Srinagar

Dr. K. Veningston delivered talk in the title of "Few-shot Learning in Computer Vision" and He discussed about the Computer vision basics, various techniques, challenges and solutions. He provided the hands-on demo on few computer vision applications.

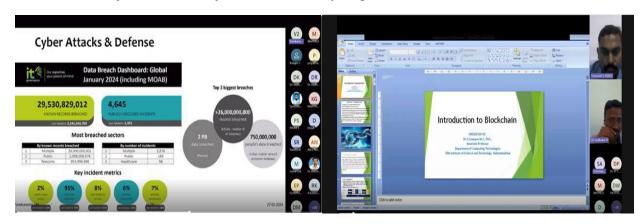


Date: 29.02.2024 Session: I - Dr. R. Kalpana, Professor/CSE, Pondicherry Technological University

Dr. R. Kalpana delivered a talk titled "Generative AI tool for Teaching and Learning" and she discussed various Artificial Intelligence tools and their features. She expressed her research problem and solution in Teaching and Learning are with the use of AI tools.

Date: 29.02.2024 Session: II – Dr. Amita Pal, Professor, Indian Statistical Institute, Kolkata

Dr. Amita Pal delivered a talkin the title of "Recent advances in Statistical Learning" and she discussed the statistical fundamentals and methods. She also expressed his research problems and solution by using the various statistical methods.

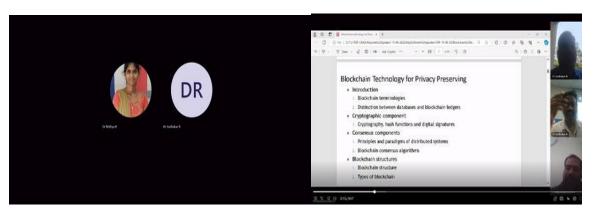


Date: 01.03.2024 Session: I - Dr.S.Gnanavel, Associate Professor/CSE, SRM Institute of Science and Technology, Chennai

Dr. S. Gnanavel delivered a talk titled "Cryptography and Blockchain usage in Artificial Intelligence" and he discussed the various cryptography challenges and Artificial Intelligence basics. He given hands-on session in the area of cryptography.

Date: 01.03.2024 Session: II - Dr. R. Nidhya Professor/CSE, MITS

Dr. R. Nidhya delivered talk in the title of "**Data Science with Julia**" and she discussed the Big Data and Data Science basics. She provided the hands-on session in working with Julia tools for data analytics.



Date: 02.03.24 Session: I - Dr. Chandramohan D, Assistant Professor/CSE, Thapar Institute of Engineering

Dr. D. Chandramohan delivered talk in the title of "Blockchain Technology for Privacy – Preserving in Global Environments" and He discussed about the Global environment challenges and also expressed about to overcome the challenges through the Block chain technologies.

Date: 02.03.2024 Session: II - Dr. A. Dhanapal, DELL EMC, Chennai

Dr. A. Dhanapal delivered a talk in the title of "Introduction to Machine Learning, Numpy, Pandas and ML project Kick Start" and He discussed about the Machine learning tools. He provided the hands-on demo on Machine Learning tools such as Numpy and Panda with the real time data.



Valedictory Ceremony

Dr. R. Sudhakar, Associate Professor, Dept. of CSE, MITS anchored the valedictory ceremony. Dr. R. Kalpana, Head of the Department / CSE addressed in the valedictory ceremony meeting and briefed about the summary of the FDP program.

Few participants shared their experience and highlighted the FDP. Dr. K. Sudhakar and thanked all the participants for providing support and attending the 6 Day programme.

Outcome of the FDP:

Emerging technologies in the fields of Artificial Intelligence (AI), Machine Learning (ML), and Data Science have a significant impact on various aspects of society, industry, and academia. When considering the outcome of a Faculty Development Programme (FDP) focused on these technologies, several key impacts can be observed:

- 1. **Enhanced Teaching Capabilities**: Faculty members gain a deeper understanding of the latest advancements in AI, ML, and Data Science, enabling them to impart cutting-edge knowledge to students. This includes teaching methodologies, tools, and techniques that are currently prevalent in industry.
- Curriculum Development: The FDP may lead to the revision or development of curricula to incorporate the latest trends and technologies. This ensures that students are equipped with the skills and knowledge required to excel in a rapidly evolving technological landscape.
- Research Opportunities: Faculty members may explore new research avenues inspired by the discussions and insights
 gained during the FDP. This could result in collaborations with industry partners or other academic institutions, leading
 to innovative research projects.
- 4. Skill Enhancement: Participants acquire new skills and competencies related to AI, ML, and Data Science, which can enhance their professional profiles and career prospects. This includes proficiency in programming languages, data analysis tools, and machine learning algorithms.
- 5. **Industry Relevance**: The FDP helps bridge the gap between academia and industry by ensuring that faculty members are aware of the latest industry practices and requirements. This fosters better alignment between educational programs and industry needs, enhancing the employability of graduates.
- 6. **Networking Opportunities**: Participants have the chance to network with experts, practitioners, and fellow educators in the field, facilitating knowledge exchange and collaboration. This network can be valuable for future research collaborations, job opportunities, and professional development.
- 7. **Institutional Recognition**: Institutions that offer high-quality FDPs in emerging technologies gain recognition and credibility within the academic and industry communities. This can attract talented faculty members and students, as well as potential funding opportunities for research initiatives.
- 8. **Innovation and Entrepreneurship**: The FDP may inspire participants to explore entrepreneurial ventures or innovative projects leveraging AI, ML, and Data Science technologies. This could lead to the development of startups, products, or services that address real-world challenges and opportunities.

Overall, the outcome of an FDP focused on emerging technologies in AI, ML, and Data Science is multi-faceted, with impacts ranging from improved teaching quality and research output to enhanced industry relevance and innovation. Such programs play a crucial role in empowering faculty members to stay abreast of the latest developments in their field and prepare the next generation of professionals for success in a data-driven world.